

## LIFE HISTORIES OF NORTH AMERICAN GEOMETRIDAE.—LVIII.

BY HARRISON G. DYAR, WASHINGTON, D. C.

*Mesoleuca vasihata* Guenée.

*Egg.* Elliptical, rounded, normal, the depression marked; all rounded, no flat areas; evenly reticulate with broad low lines, hexagonal, finely punctate shagreened all over. Pale waxy yellow; size .9 x .6 x .5 mm.

*Stage I.* Head rounded, whitish testaceous, eye black, mouth brown. Body thin and slender but not rapid in motion, becoming rigid erect when disturbed; white, the ends (joints 2-4, 10-13) yellowish tinged in certain lights from their retraction. No marks; no shields; tubercles concolorous, obscure; setae stiff, pale, rather conspicuous.

*Stage II.* Head rounded bilobed, the apex of clypeus depressed, shining light yellow, ocelli black; width .5 mm. Body slender, rather elongate, normal, coarsely annulate. Setae rather coarse, white; no shields; tubercles invisible; no marks, food green.

*Stage III.* Head round, bilobed, free, lobes full, shining ochraceous luteous, clypeus depressed, ocelli black; width .8 mm. Body moderate, green from the food, unmarked, the folded incisures whitish; tubercles a little elevated, round, shining, colorless; feet pale; no shields; setae short, pale; subventral fold prominent.

*Stage IV.* Head rounded, shining, caramel luteous, setae brown, ocelli black; width 1.1 mm. Body cylindrical, slender, the central segments well elongated. Translucent green, incisures narrowly folded, yellowish; tubercles small, round, white, elevated, distinct. The dorsal vessel shows darker and the tracheal line white by transparency. No marks; no shields; thoracic feet brown. About joint 9 a broad stigmatal band begins and runs to the anal feet. It is also slightly indicated on thorax. Setae moderate.

*Stage V.* Head long, bilobed, green, shagreened, the lobes full, pale greenish, the epistoma, and antennae whitish with a short white band before the eyes; width 1.7 mm. Body moderate, elongate, cylindrical, the segments wrinkly annulate, anal feet large, projected outwardly. Green, anal feet and dorsum of joint 13 shaded in vinous; tubercles elevated, rounded, white like small buttons. Very faint longitudinal white washed lines; dorsal vessel dark green; setae moderately long, distinct. Later the head acquired a red flush over the lobes.

*Food plant* thimbleberry (*Rubus nutkanus*); the hatched larvae ate this plant and a wild larva was found on it. Larvae from Kaslo, British Columbia.